

**Transportation Curriculum Coordination Council (TCCC)**  
**2001 Work Plan Update**  
**September 28, 2001**

**Note:** Should you desire contact information for any of the following please contact Howe Crockett of FHWA-WFL 360-696-7750, [hcrockett@fhwa.dot.gov](mailto:hcrockett@fhwa.dot.gov) or John Perry of FHWA-HQ-HIAM 202-366-2023, [johna.perry@fhwa.dot.gov](mailto:johna.perry@fhwa.dot.gov).

**WORK PLAN ITEMS/TEAM MEMBERS**

**Field Structural Coatings Inspection,** Greg Doyle FHWA-MA, Mike Praul FHWA-ME, Bob Kogler FHWA-Turner Fairbanks. Early in 2001 Mike Praul and Bob Kogler discussed a proposal to develop a Structural Coatings Certification course with several State DOTs and received positive feedback in support of such a course. SSPC and the NETTCP also expressed interest in sponsoring this certification course. During August Mike presented the proposal to develop a Structural Coatings Certification course to the Pavement & Structures Task Force at the AASHTO Subcommittee on Construction meeting in Wichita, Kansas. Response of Task Force members was supportive of this proposal. During the winter of 2001/2002 Mike and Bob will be putting together a Technical Panel of about 6 people (4 DOT + 2 Industry) to help develop the course. The course is expected to be 2-1/2 days and the course material will be prepared using existing FHWA training materials.

**Structural Fabrications Inspection,** Woody Hood MD-DOT. Woody recently discussed training for major structural steel fabrications with many State Transportation Agency and industry representatives. Most of them indicated that there is already enough material out there on this subject, AWS, AASHTO Bridge Code, AISI, & ASNT, for training inspectors. Woody has not found any formalized programs to date, however, he is still looking and should have more information to report on at the December 4<sup>th</sup> and 5<sup>th</sup> TCCC meeting in New Orleans.

**Resident Engineer Academy,** Bill Beuter VA-DOT, John Perry FHWA-HQ-HIAM, Lee Onstott NM-DOT, & Alan Samels AZ-DOT. Initial discussions on Resident Engineer Academies began in May of 2001. The scope of work was drafted during June and finalized in July by the technical panel. Phone conferences began in August and are on going at this time. Seven general questions have been pulled together to ask the State Transportation Agencies about their training programs. Questions asked were related to the different terms used for resident engineers, where did they learn their trade, whether or not a state has a formal training program, what it is, do they think one would be beneficial, who the contacts are, etc. The team will review this information during October. Formal field reviews will also be scheduled and carried out to gather additional information. A final report will be prepared and should be presented at the AASHTO Subcommittee on Construction meeting in 2002. Work is ongoing.

**Training for High Strength Bolting Installers for Overhead Sign Structures,** Woody Hood MD-DOT, Woody has had conversations with Jerry Schroider of FHWA's SC Division Office on this issue. No training program currently exists. Jerry did indicate that there is a need for training and that the High Strength Bolting Program for Structural Steel Bridges could be

adapted for overhead sign structures if desired. Pending State Transportation Agency interest this could be pursued if enough States are interested, please let Woody know of your interest.

**Training for Profilers**, Chris Newman NHI, Woody Hood MD-DOT. Maryland is one of the lead States in developing a program for training and certifying operators. Woody expects to have a finished document for the next TCCC meeting in December. In addition to this work, NHI has two upcoming courses on pavement smoothness. Course one, Factors Affecting Inertial Profile Measurements for Construction Quality Control. This course is under development and a pilot session is anticipated for January of 2002. It will focus on basic elements of profilers (components, outputs, filtering); using profiler output to establish smoothness indices; relationships between profiler results and equipment, measurement environment, operation, and the operator; and relating errors in data acquisition to changes in computed indices. Course two, Fundamentals of Pavement Smoothness, an RFP is under development to contract directly with Steven Karamihas (University of Michigan) for presentation of his one-day smoothness course. We expect that the course will be available for the winter of 2001-2002; since no development is needed, delivery of the course could begin as soon as a contract is in place.

**Training for Non Nuclear Density Gage**, Lee Gallivan FHWA-IN. Evaluation continues on the effectiveness of various types of gages. Specific training programs will be developed in concert with Industry representatives when the devices are correlated and calibrated. The latest information available will be presented during the next TCCC meeting in December.

**Construction Workmanship NHI Course**, Alan Samuals AZ-DOT, John Perry FHWA-HQ-HIAM, Bill Beuter VA-DOT, Lee Onstott NM-DOT, Peter Osborn FHWA-RI, Chris Newman NHI. Initial discussions began on the development of this NHI course in November of 2000. An AASHTO Subcommittee on Construction Resolution formed the basis for getting the development kicked off. A technical panel was formed in June of 2001. An RFP was sent out, proposals reviewed and the contract awarded to Nichols Consulting Engineers in July. The kickoff meeting with Nichols took place in Reno, Nevada in late August. The technical panel worked on the course outline, the target audience, course and learning objectives. Nichols is currently developing the outline for the course.

**National Pollution Discharge Elimination System / EPA, & Design and Implementation of Erosion and Sediment Control, NHI Course # 134054**, Joe Kinnikin AGC-NM, John Perry FHWA-HQ-HIAM. Joe is working with Brian Deery of AGC in Washington DC to provide the training materials and workbook to John Perry for review. Joe is giving a presentation on this in October. The Design and Implementation of Erosion and Sediment Control, NHI Course # 134054 is newly developed for the field. This course was developed during Spring / Summer of 2001 to assist highway professionals in the planning, design, implementation, enforcement, inspection, and maintenance strategies to control erosion and sediment on highway construction projects, and to help ensure that legislative objectives are addressed accurately and uniformly. Nichols Consulting Engineers is responsible for the development of the course, in collaboration with GKY& Associates of Springfield, VA. One pilot course has been completed and another is scheduled for late October 2001 in Little Rock, Arkansas. The course is available for scheduling through Mila Plosky of NHI. 703-235-0527 or [mplosky@fhwa.dot.gov](mailto:mplosky@fhwa.dot.gov).

**Pavement Distress and Performance Measurements**, Chris Newman, NHI. The Pavement Evaluation and Rehabilitation NHI courses have been under development and are nearing completion. Material for the HMA version was delivered recently and is ready for printing. CD's are available upon request to each of the five regional technician and certification groups. The PCC version completed shortly.

**Geotechnical Inspector Certification Program**, Peter Osborn FHWA-RI and Chris Newman NHI. The technical panel has been active in getting the RFP's and funding pulled together for the Drilled Shaft Foundation Inspector and Driven Piles Inspector NHI courses. The proposals and Best and Final Offers were reviewed during July and August of 2001. Driven Piles was awarded to Parsons and Drilled Shaft Modules was awarded to Ryan Berg and Associates. The kickoff meeting with the technical panel and the contractors is scheduled for the middle of November at NHI's facilities in Arlington, VA.

**TCCC Website for Sharing Information and Training Materials, Listserver**, Chris Newman, NHI's computer person is still working on the database side of the site. This should enable users to easily input information and keep it up to date, and the database is automatically linked to the website to keep its information current. Development of the website has taken longer than expected, recent setbacks occurred due to the attack of the Nimda virus. NHI expects to make good progress on development of the TCCC website and list server during mid October.

**Facilitate AASHTO Test Methods Standard Changes**, Tom Baker ID-DOT, Woody Hood MD-DOT. The following update is provided in draft form for informational purposes and is subject to minor changes.

- (1) WAQTC TM-1 Percent fracture in coarse aggregate - This is going to AASHTO ballot soon.
- (2) WAQTC TM-2 Sampling fresh mixed concrete, this passed in part, AASHTO T-141 for Air and slump etc. at the first of the load, however the cylinders still require combining parts of the load. We still need to work on this to allow all testing at one time as TM-2 is.
- (3 & 4) WAQTC TM 3 and TM 4 Sample preparation and testing asphalt binder content by nuclear asphalt content gage. This should be balloted soon.
- (5) WAQTC TM-5. Reducing samples of Hot mix asphalt Randy in Arizona is working on this one, not aware of current status.
- (6) WAQTC TM-6 Moisture content of Bituminous mixes by oven. This was balloted by AASHTO last year in combination with another test and failed. It should be reballoted soon alone and is expected to pass.
- (7) WAQTC TM-7 Nuclear density in Soils. This is now AASHTO T- 310.
- (8) WAQTC TM-8 Nuclear density of Bituminous mixes. This should be reballoted soon.
- (9) WAQTC TM-9 Harvard method soil density, dropped by WAQTC Sept 18, 2001. Never proposed to AASHTO due to its limited use. (10) WAQTC TM-10 Temperature of fresh concrete. This is now AASHTO T-309.

**Image of Industry Recruiting and Marketing**, Joe Kinnikin AGC-NM, Lee Onstott NM-DOT. Materials such as video tapes and manuals that AGC has developed have been put together with information from various student fairs from across the country. These materials will be made available during the next TCCC meeting in December. A presentation on Recruiting and Image Building was given at the Subcommittee on Construction meeting in Wichita, Kansas this summer with information available through Chris Drda, of Penn DOT. The following initiatives were developed by committee: [www.roadRus.org](http://www.roadRus.org), a website promoting careers in the construction industry; Show Me the Money, a two page advertisement developed for Magazines; "Build Up!" Kit, a tool selected to reach the younger generation; Construction Inspectors Course, another avenue for targeting of underemployed and unemployed individuals through learning facilities at community colleges and vocational schools; needs assessment, a tool used to identify training needs for all partners; Career Days, current availability of full time, part time, and summer positions as well as co-op and internship positions are publicized; Building Your Future CD, an interactive CD targeted at recruiting 9<sup>th</sup> to 12<sup>th</sup> grade students into the construction industry; and a 4- Year Highway Technology Curriculum for Vo-Tech Schools, highlighting educational programs for those interested in highway construction. For additional information please contact Chris Drda or Amar Bhajandas at 717-787-6989 or [abhajan@dot.state.pa.us](mailto:abhajan@dot.state.pa.us). You can also visit their website at [www.pacareerlinks.state.pa.org](http://www.pacareerlinks.state.pa.org).

**Maintenance Techs & Certification Partnership for Pavement Preservation**, Lee Gallivan FHWA-IN. The Midwestern Pavement Preservation Partnership (M\_PPP) met in April 2001 and created task forces in the areas of Materials, Research, Training, Specifications, and Policy. In the area of training, the group main key issue was to coordinate their activities with the North Central Multi-Regional Training and Certification Program group (M-TRAC). The M-PPP planned to survey the State Transportation Agencies about what is available, this was provided through M-TRAC information. Specific areas of interest includes: Construction Technician (Worker) Certification Program, Understand performance variables of identical fixes, Learn about the optimal timing of preservation treatments, Justify edge drain retrofits to public, Improve consistency of Concrete Pavement Restoration (CPR) treatments, and Manage truck overloads and the problems they create.

**Train the Trainer for Technicians**, Chris Anderson IA-DOT, Chris Newman NHI. Chris Anderson is currently reviewing NHI's instructor and student manuals for Train the Trainer. She has been working with Dan Lipinski of VA-DOT to determine if the course will meet the needs of the TCCC. Chris plans on working with NHI to address any comments or suggested changes to the course materials. In addition to reviewing the course materials she plans on auditing the course to see if it meets the needs of the TCCC.

**Work Zone Traffic Control**, Jack Cowser NC-DOT, Louisa Ward FHWA-HQ, Mike Robinson, FHWA-HQ; Jack reviewed the Computer Based interactive training on Work Zone Safety developed for New Jersey Division of Highway Traffic Safety. His assessment is that it seems to be fairly comprehensive. This computer based interactive course is currently available on CD, and provided free of charge, however there is a fee to take the on-line examination. Jack is obtaining information on NCHRP projects related to this and will provide comments after his review. Louisa mentioned that FHWA entered into a contract with ARTBA to develop a new

driver highway work zone safety and awareness program. At the end of the first year, ARTBA will produce and distribute 5000 toolkits containing an interactive CD, training modules for drivers ed courses, and other collateral items. A self evaluation of the awareness program and how effective it was will take place throughout the project and be discussed in the final report at the end you year two. Currently the National Highway Institute offers three work zone training courses: Design and Operation of Work Zone Traffic Control, Work Zone Traffic Control for Maintenance Operations on Rural Highways, and Construction Zone Safety Inspection. The Mobility and Safety Product Team has initiated evaluation of these courses to the curriculum reflects the most current practices, procedures and guidelines. A proposal was accepted and sent to contracts for processing in mid-September. Work expected to begin around early November.

**Construction Contract Administration**, Bill Beuter VA-DOT, John Perry FHWA-HQ-HIAM. FHWA's Office of Program Administration has developed a course on its Contract Administration Core Curriculum. A Participants Manual and Reference Guide for 2001 is currently available. State Transportation Agencies are eligible to schedule the course at any time. As part of the Resident Engineer Academy activity the technical panel will assess during its detailed field reviews whether resident and project engineers feel that their level of training in this area is adequate or needs additional emphasis. Other avenues for training in contract administration will be reviewed and information provided.

**Concrete Paving Construction Inspector**, Woody Hood MD-DOT & Mike Arasteh MD-DOT. Woody has received a lot of information on concrete paving construction inspector programs from ACI, Iowa DOT, and Florida DOT. He is expecting more materials to come in for review. He will make recommendations as to which courses and materials meet the needs of the TCCC at the next meeting in December.

**Concrete & Steel Structures Construction Inspector**, Woody Hood MD-DOT & Mike Arasteh MD-DOT. Woody is in the process of reviewing information provided by Iowa DOT and the American Concrete Institute. Some materials have not been received as of yet. Woody hopes to have recommendations for the next TCCC meeting in December.

**Embankment and Base Inspection**, Tom Baker ID-DOT, Lee Onstott NM-DOT. WAQTC is currently on hold in the development of an embankment and base inspection course. When they do gear up to work on this course it will be developed based on input from existing courses and by modifying its format to meet the needs of WAQTC. Current WAQTC efforts are focusing on the development of a structures course to include structures inspection on concrete bridge decks, rebar, and foundations from pre-stressed to steel. Nevada DOT is working to bring a consultant on line to work on the structures course. Materials are being developed as core material, (non-state specification specifics) to meet the needs of the TCCC and to make it easier to share materials with other states.

**National Pooled Fund Initiative**, Tom Baker ID-DOT, Tom Malerk FL-DOT, Jim Sorenson FHWA-HQ-HIAM, Lee Onstott NM-DOT. A draft TCCC Resolution was prepared in July 2001 and was emailed to TCCC, ARTBA, and the AASHTO Subcommittees on Materials and Construction representatives for comment. The finished draft was presented at the Subcommittee on Materials, Maintenance and Construction Meetings this summer and approved

with minor modifications. The revised TCCC resolution on putting together a national pooled fund to assist with the development of core courses will be presented to the Steering Committee on Highways (SCOH) in late November 2001. The Subcommittee on Materials resolution will be delivered as part of the subcommittee actions by Mike Ryan, SOM chairman. Freddie Simmons, a Florida State Highway Engineer and SCOH member is being solicited to assist in tracking and supporting this resolution.

**Quality Assurance Technologist Certification Course,** Greg Doyle FHWA-MA, Chris Newman NHI, Ken Jacoby FHWA-HQ-HIAM. On June 14, 2001, Representatives of NETTCP, the FHWA Technical Panel, NHI (Chris Newman) and NHI's Consultant (Fugro-BRE) met at NHI in Arlington, VA, to discuss finalizing the NETTCP February 2001 Pilot Course material into an NHI course which could be used for NHI training or for certification by Regional or State certification/qualification groups. The attendees identified the need for 4 separate courses; the QA Technologist (Course # 134050) and 3 materials specific courses (Course #s 134051 thru 134053). Fugro-BRE agreed to submit a revised proposal to NHI for the proposed effort as it differs from original Fugro-BRE contract scope. In August - Fugro-BRE submitted a revised proposal to NHI based on their understanding of the scope identified at the June 14th meeting. In September a conference call was held by NHI, FHWA and Fugro-BRE to resolve differences in proposal assumptions, development issues, and the cost proposal, particularly related to the QA Technologist Course. It is agreed that the Fugro-BRE scope will be revised to include a Kickoff Meeting for Course #134050, to allow representatives from each of the five Regional Certification groups to meet with NHI and Fugro and reach consensus on the Course Outline prior to Fugro proceeding with course development. The kickoff meeting for this course is scheduled for November at NHI in Arlington, VA. The completion date is scheduled for March 30, 2002.